

Figure 1

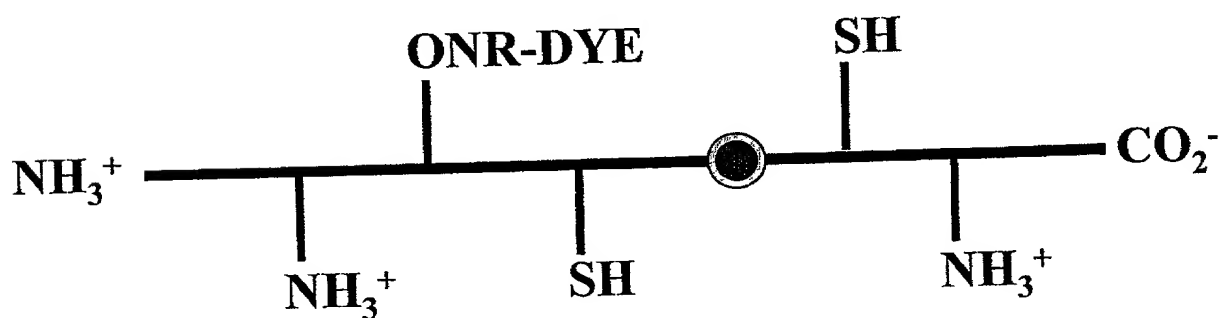
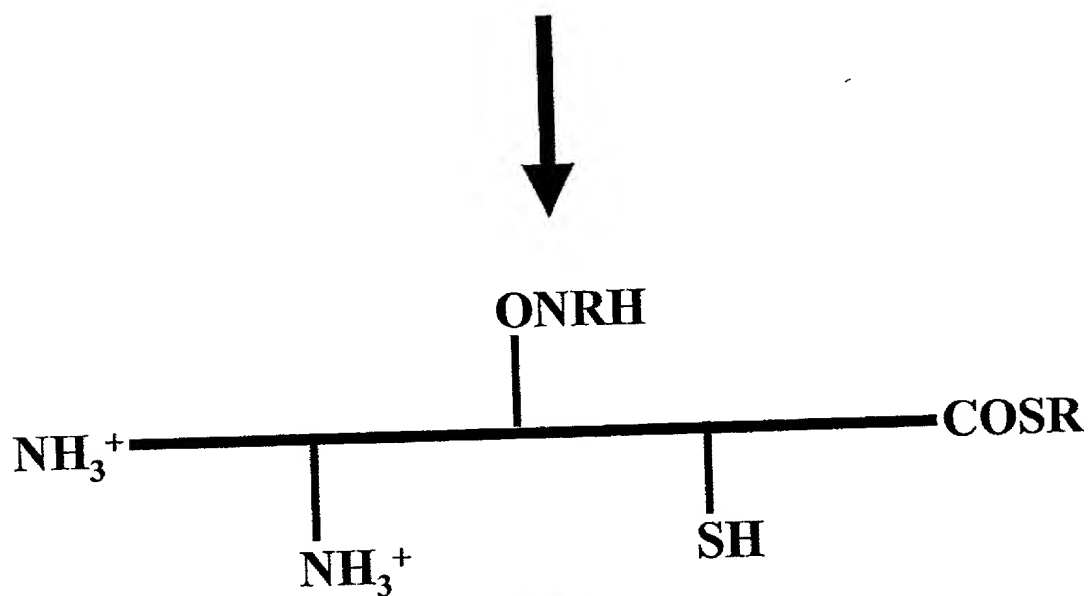
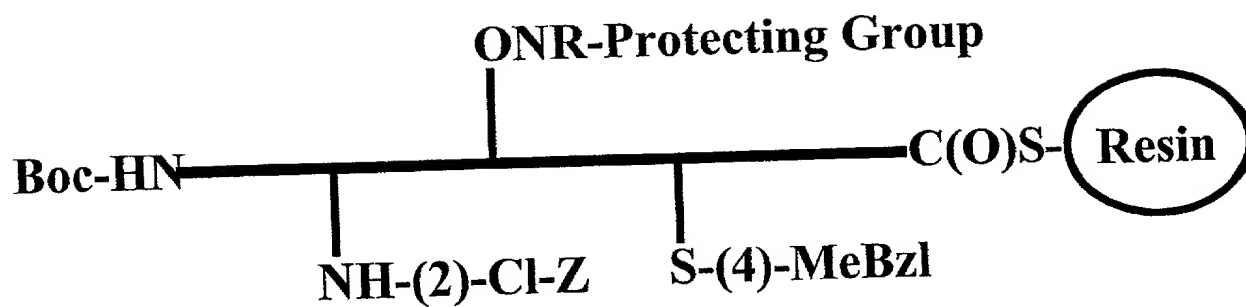
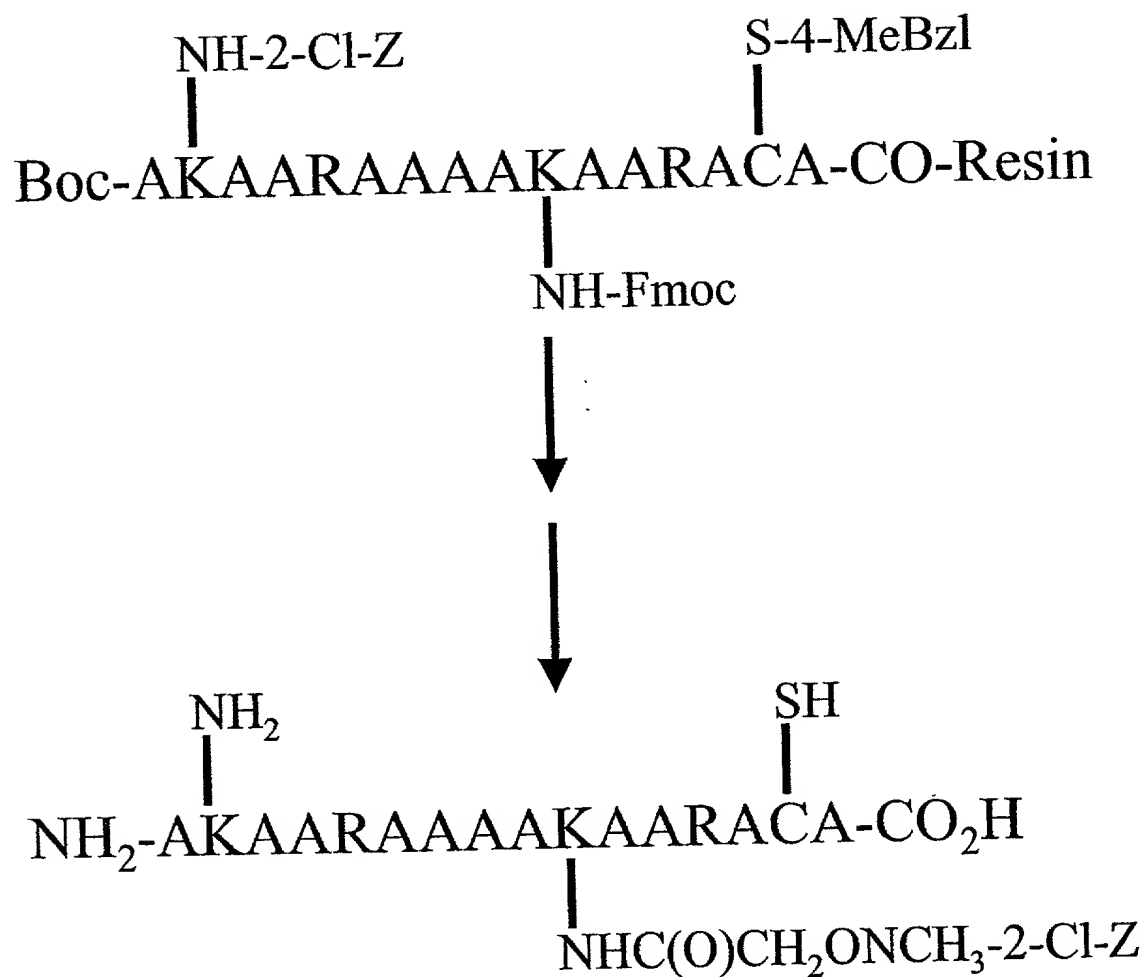
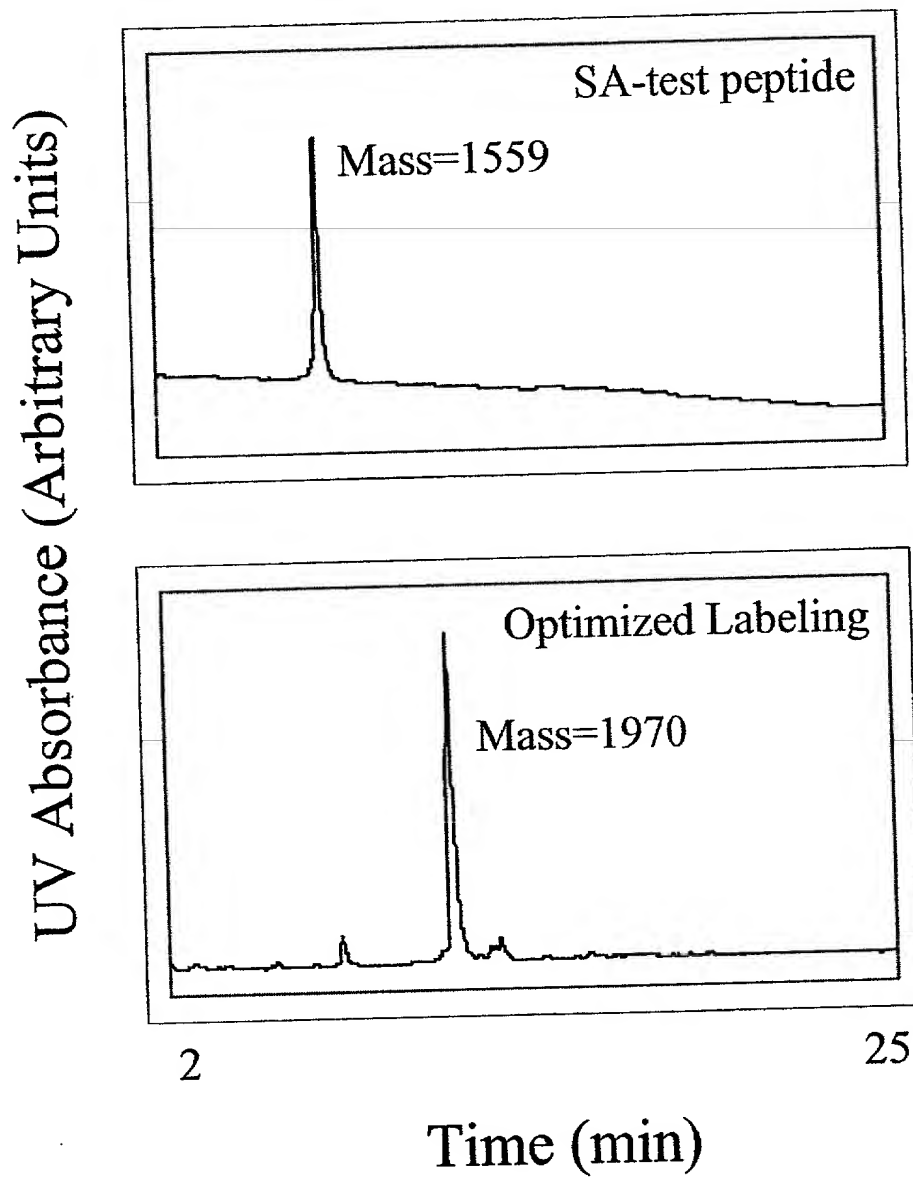


Figure 2



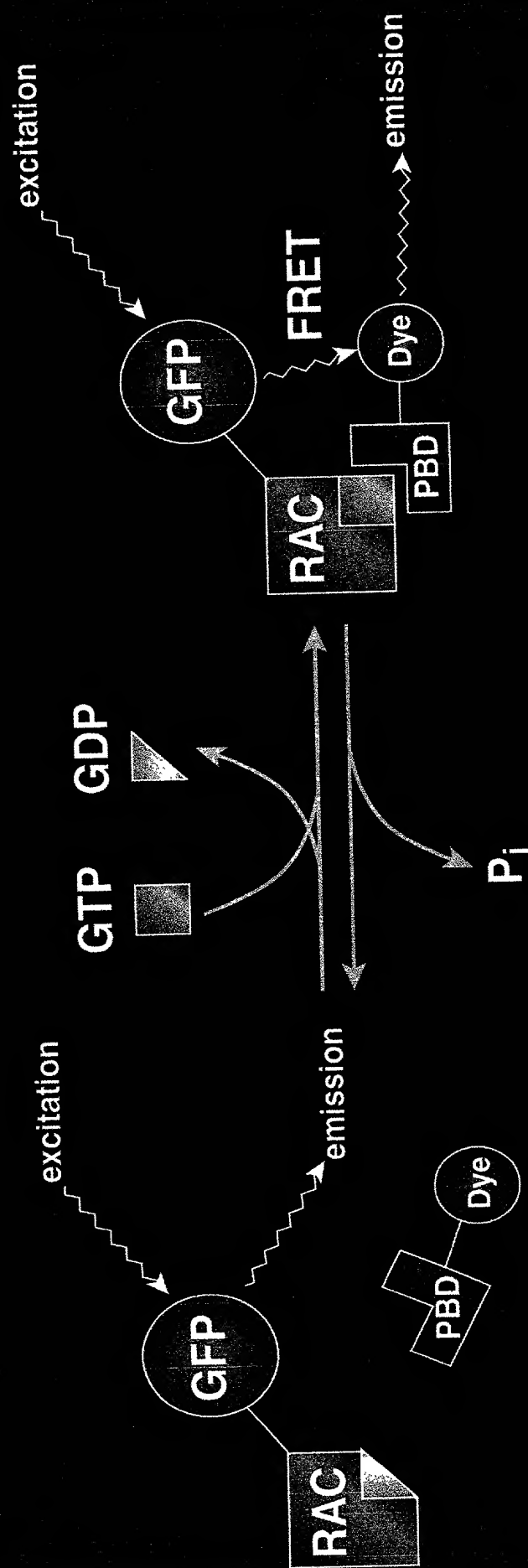
SA-Test Peptide

Figure 3



[illegible]

Figure 5



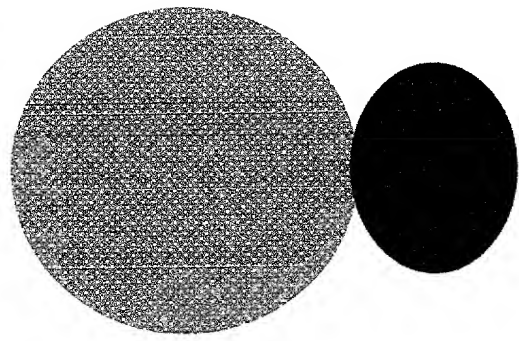
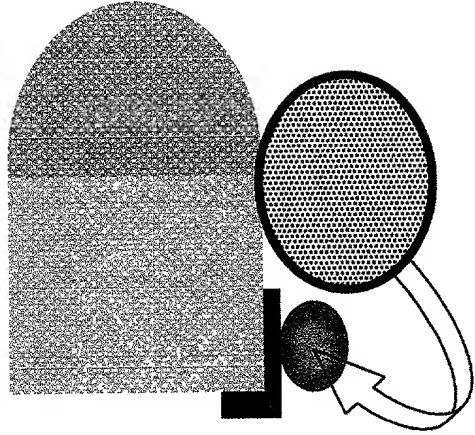


Fig. 6a



b

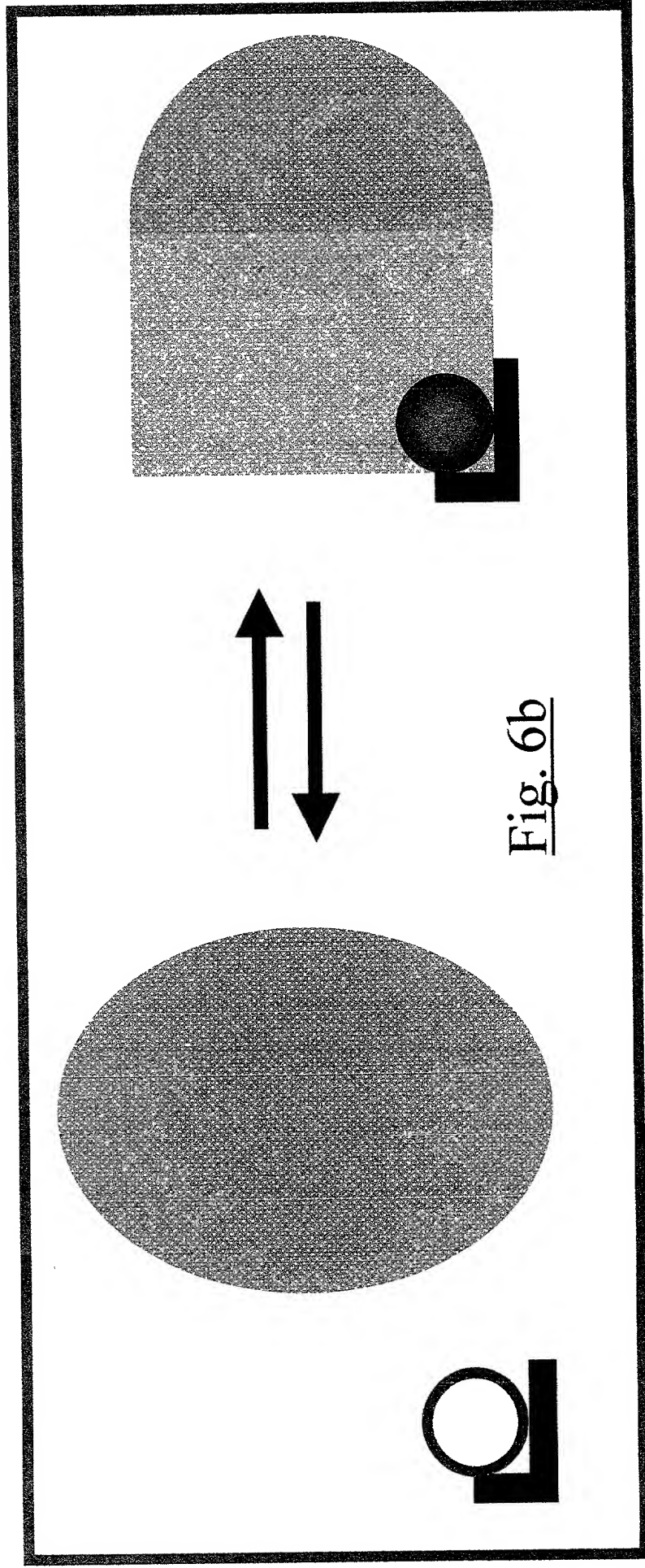


Fig. 6b

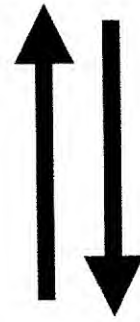


Figure 7A: GFP-Rac to Alexa-PBD FRET

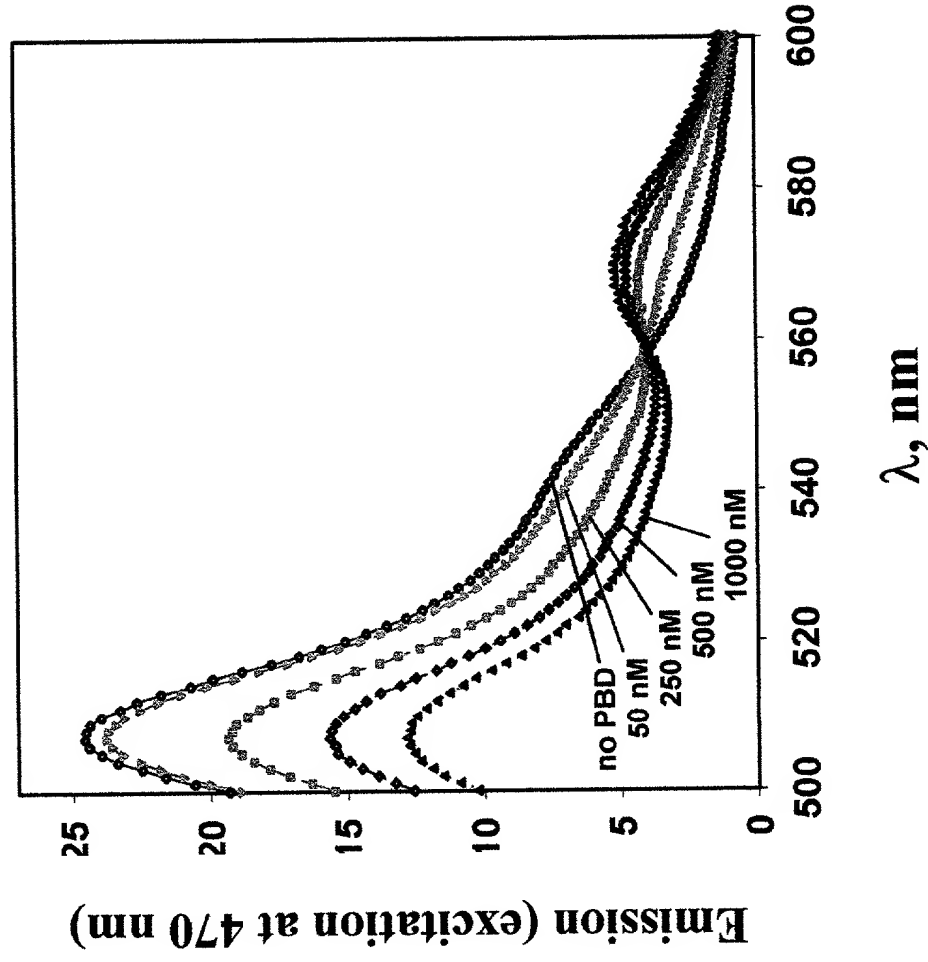


Figure 7B: FRET response to nucleotide state of Rac-GFP

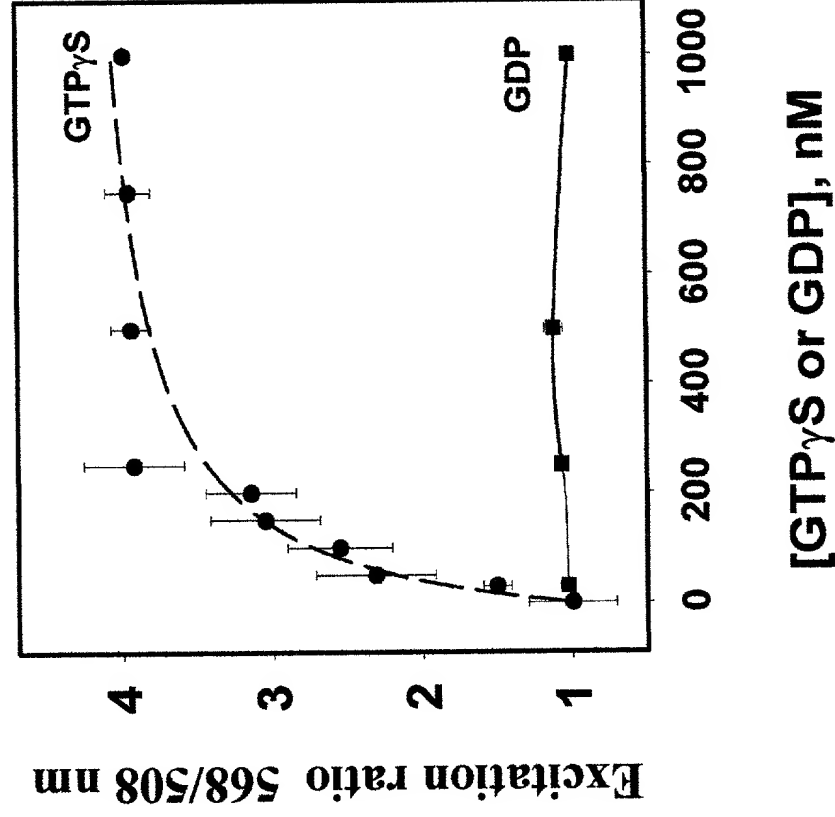
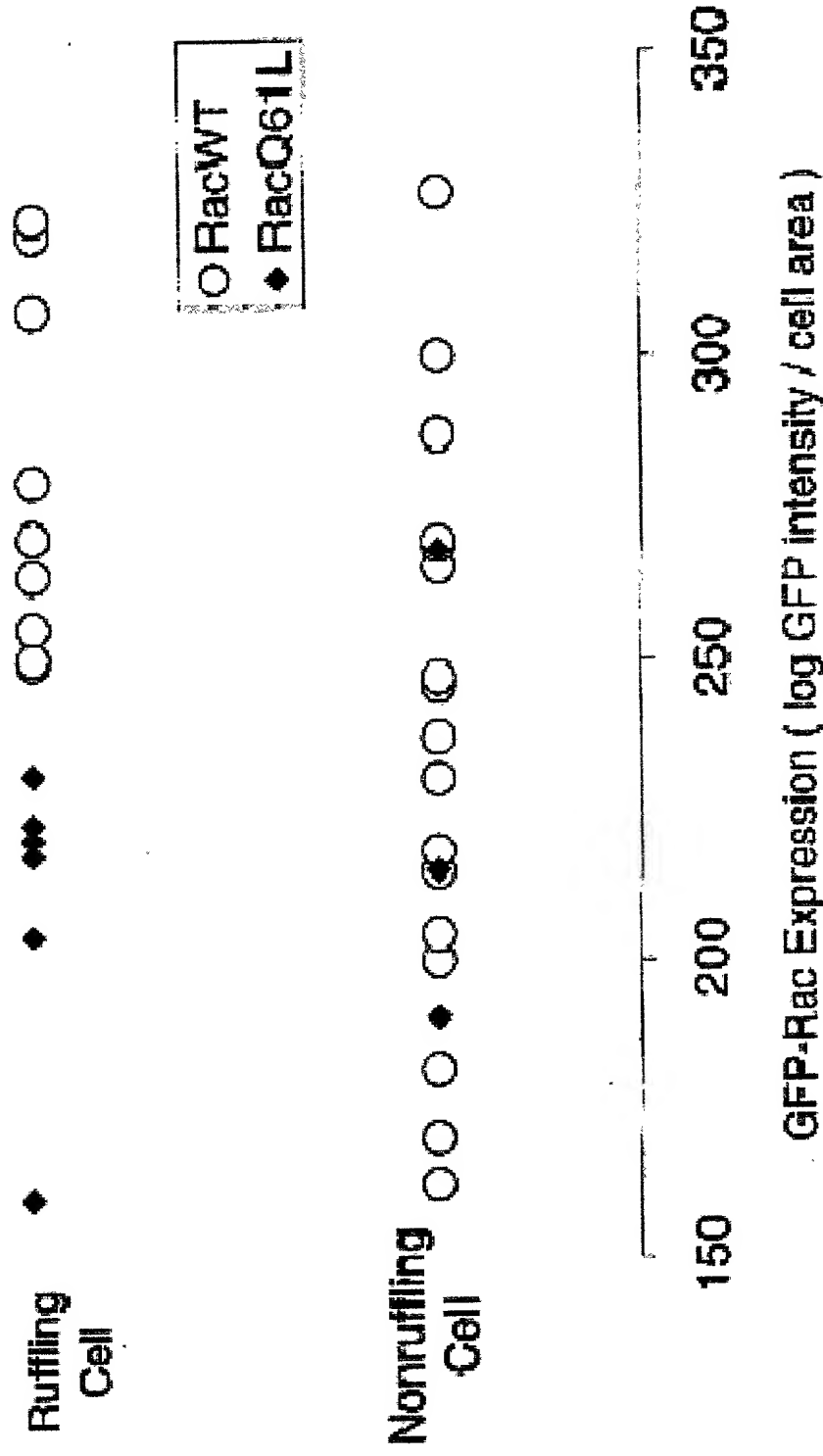


Fig. 8A

Individual cells scored for Rac-Induced ruffling



Individual cells scored for PBD inhibition of ruffle induction

Ruffling
Cell



Nonruffling
Cell

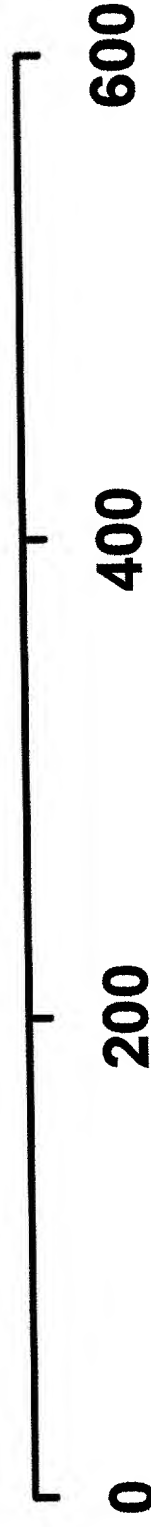


Figure 8B

Fig. 9 A and 9B: Serum stimulation of a Swiss 3T3 fibroblast

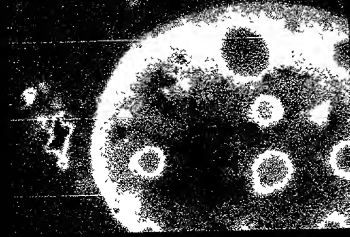
GFP-Rac

FRET

A.

Before

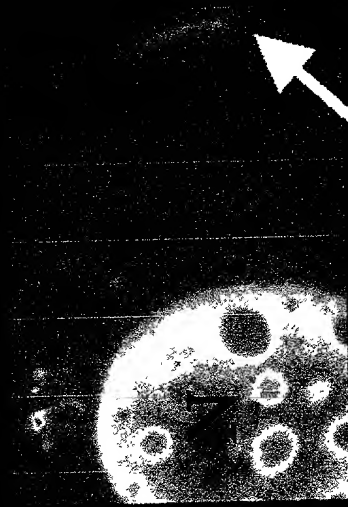
N



B.

After

N



Ruffle

Ruffle

Fig. 9C and 9D: The same ruffle visualized using
either FRET or Alexa-PBD localization:

C. FRET

intensity = 0-84

D. Alexa-PBD

intensity = 88-345



Wound healing

Confluent
monolayer

Fig. 10A: Rac-GFP

Fig. 10B: FRET



Magnitude of gradient when highest at front

128 +/- 51 % n=12

Magnitude of gradient highest at rear

9 +/- 4 % n=4

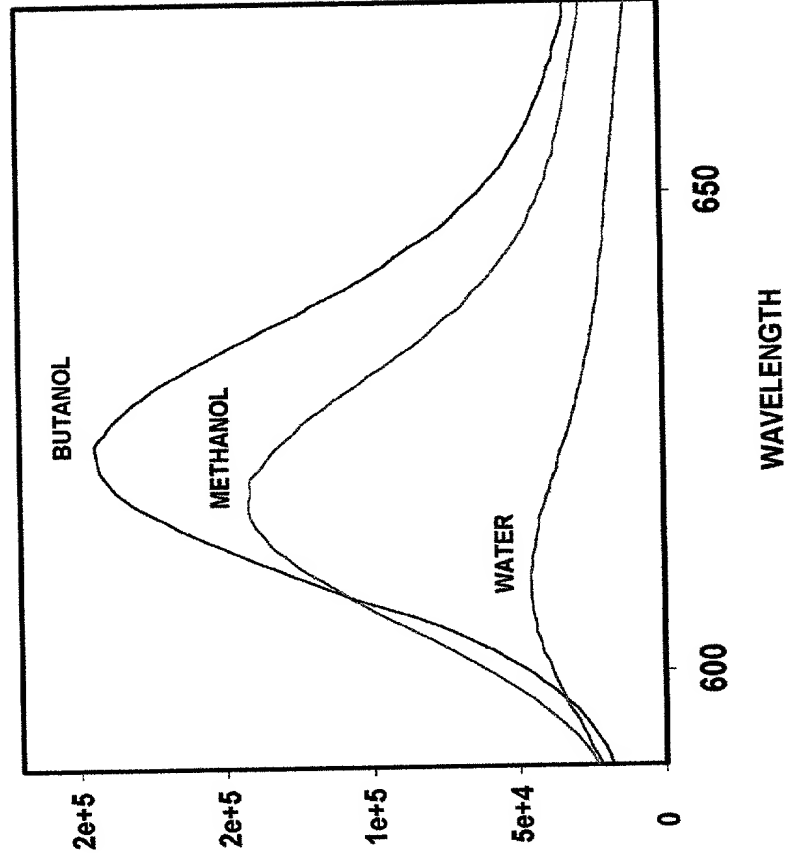
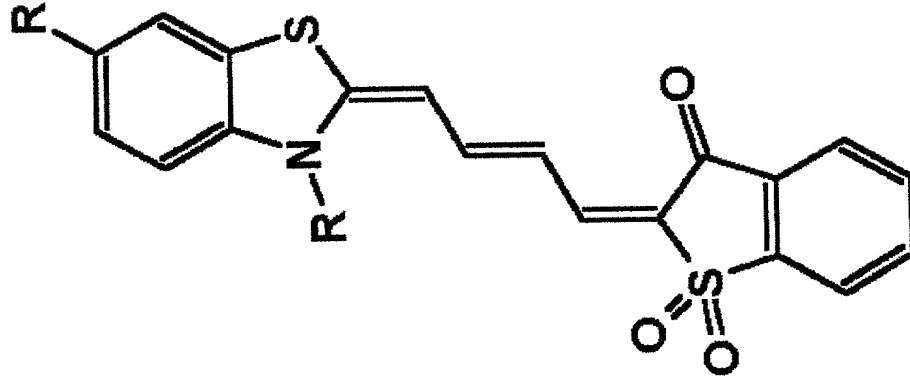


Figure 11



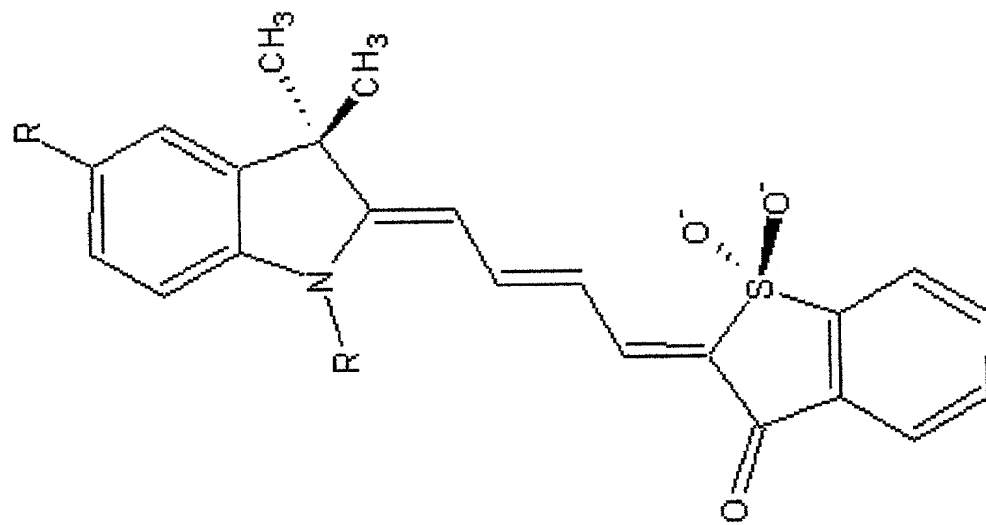


Figure 12

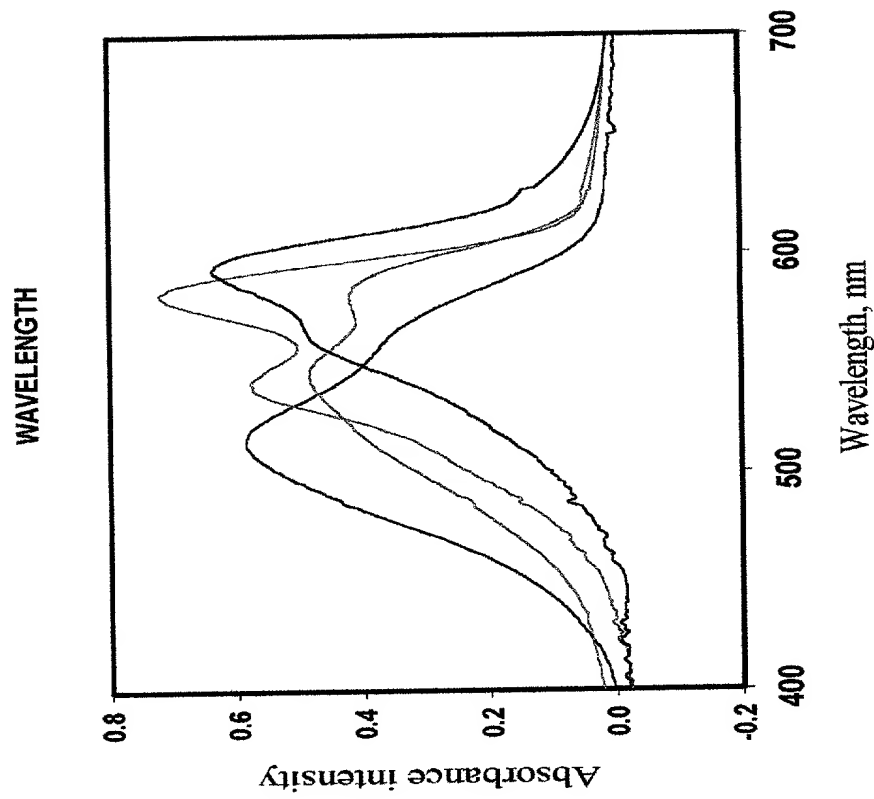
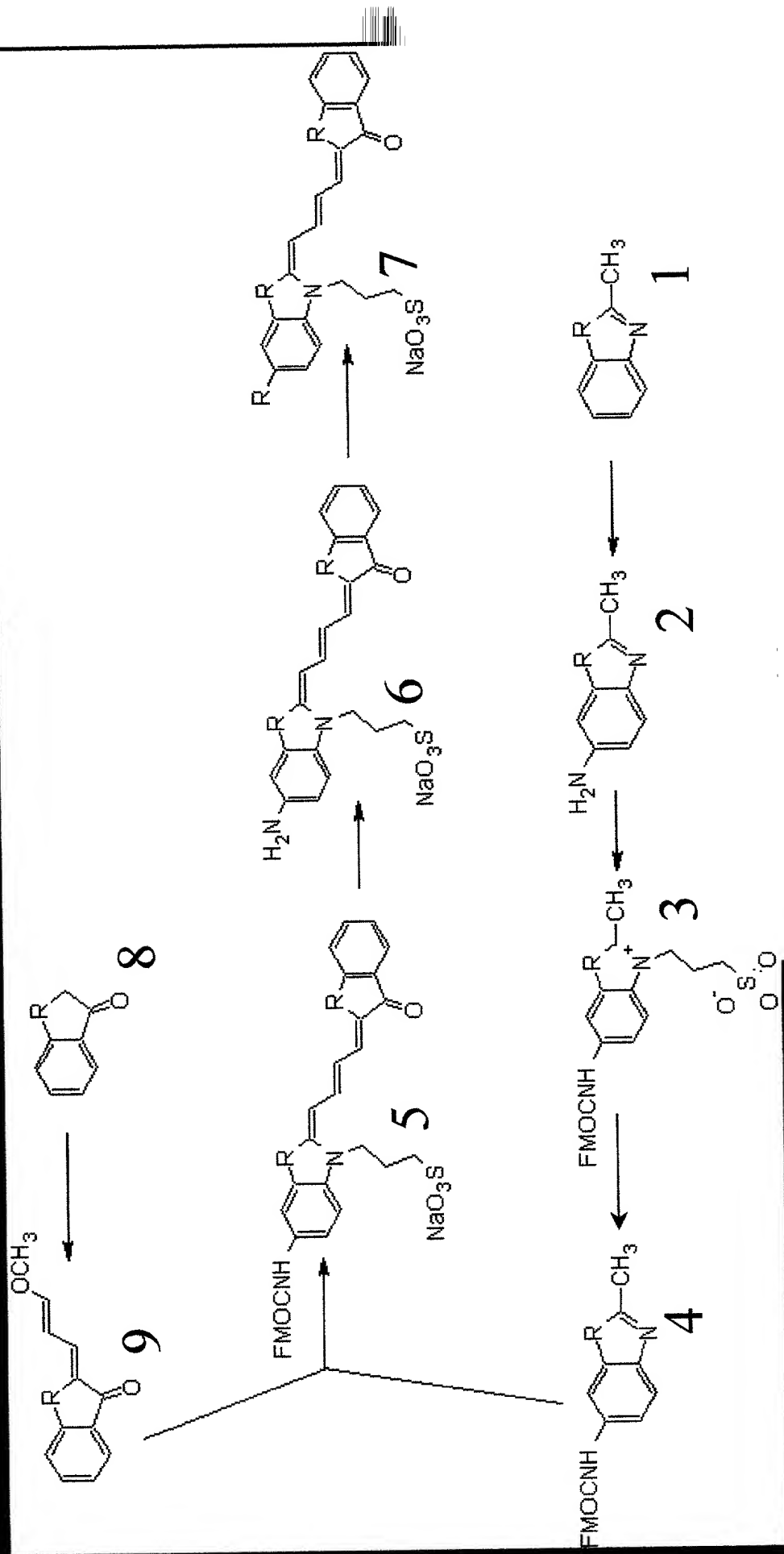
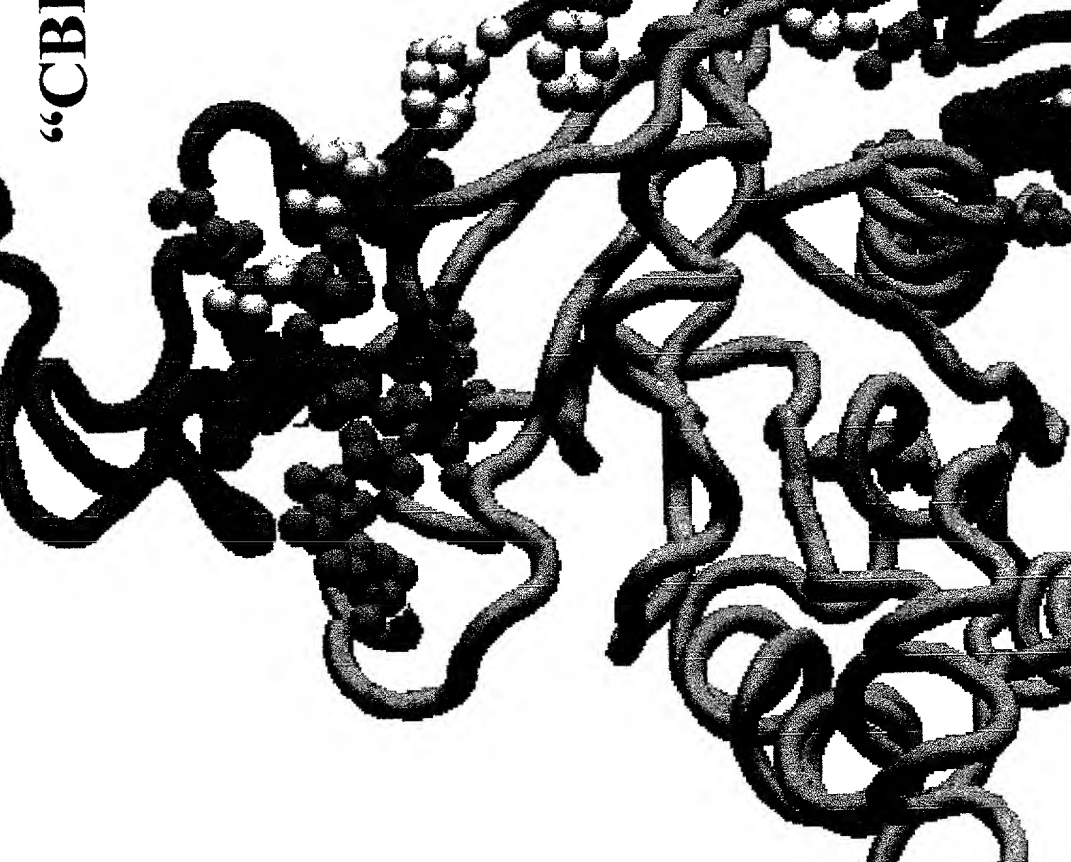


Figure 13: Convergent synthesis of merocyanine dyes



42

“CBD” (C)



“CBD” (WASP CRIB domain)


sites of dye attachment

hydrophobic amino acids

Cdc42

Fig. 15: Fluorescence of Mero-CBD responds to Cdc42 binding

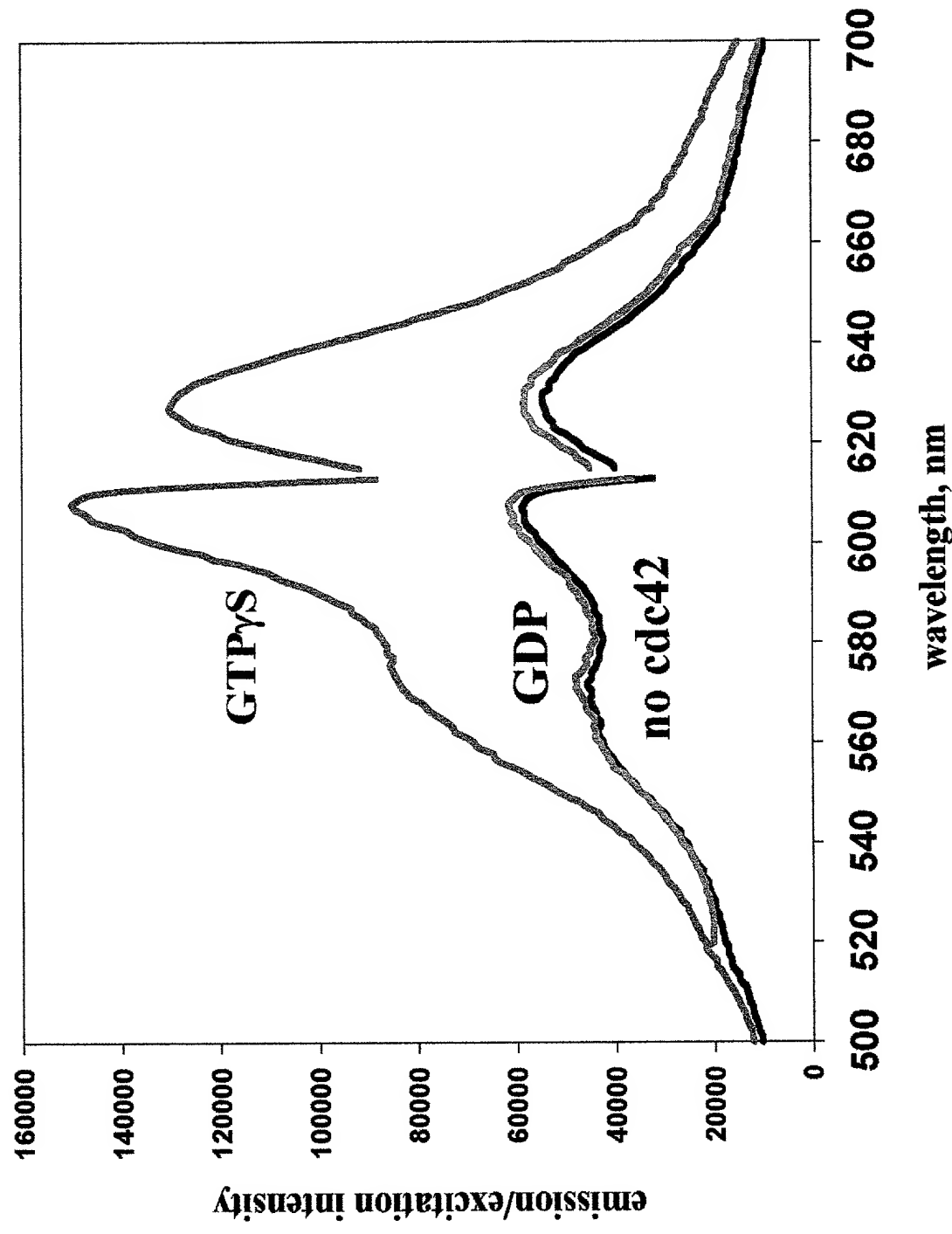
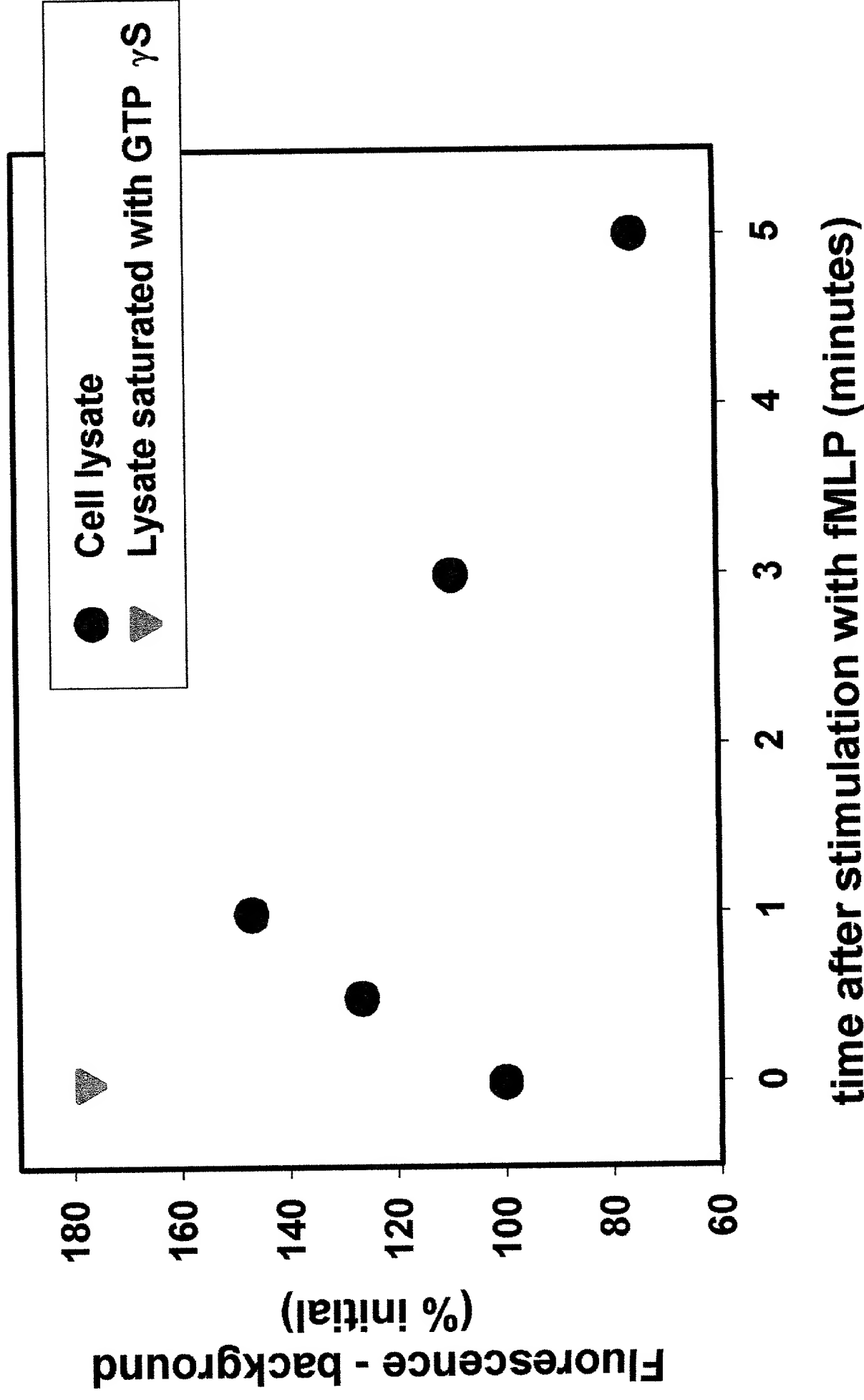


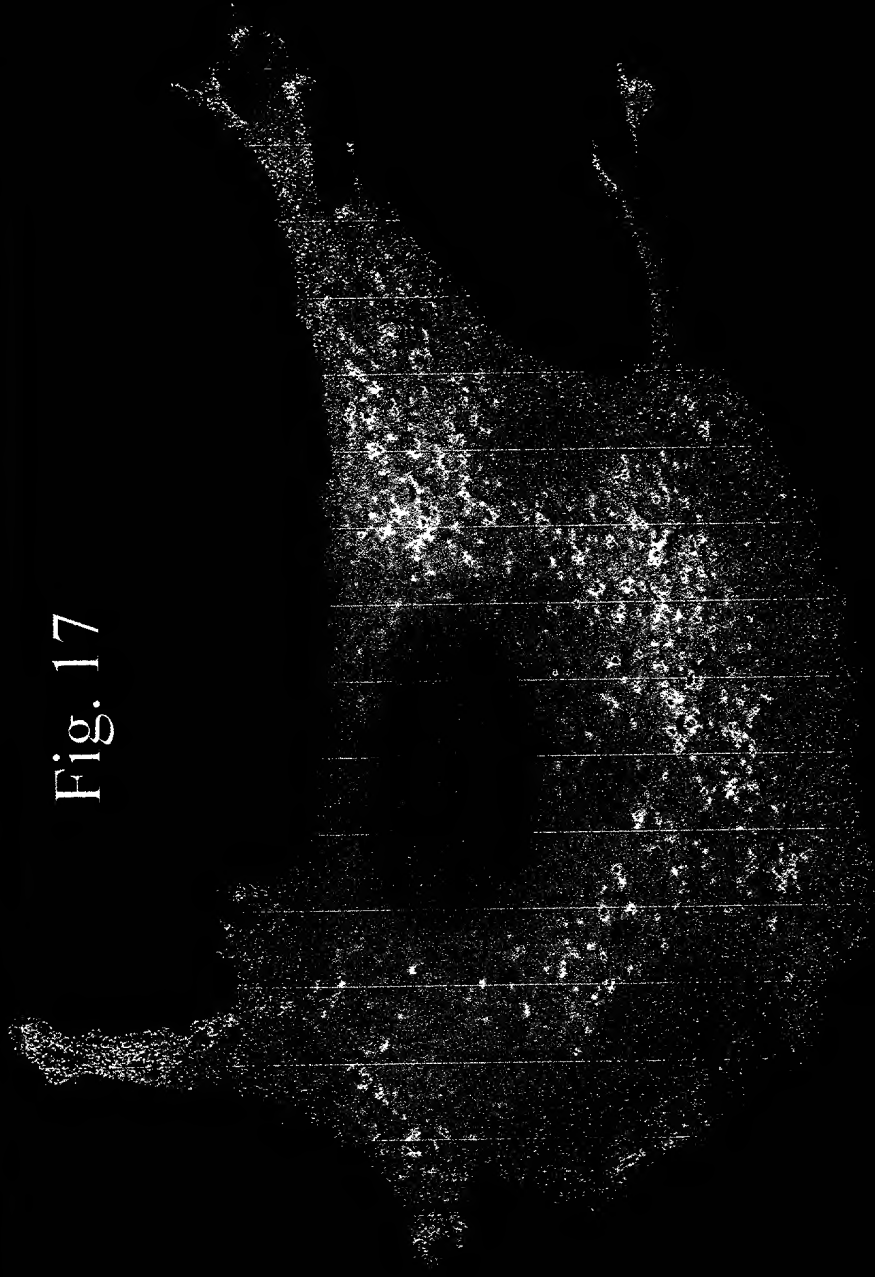
Fig. 16: Mero-CBD in neutrophil lysates



Mero-CBD
Alexa-CBD

Fig. 17

Intensity =
28 - 72



Alexa-CBD

Mero-CBD

